

Briefly

INTERNATIONAL

Red List assessment confirms tuna in trouble

The first global assessment of the conservation status of the scombrids and billfish, two groups of fish that include species of high commercial value such as tuna, marlin and mackerel, is bleak reading. Sixty-one species were assessed according to the categories and criteria of the IUCN Red List, with five species classified as Vulnerable, one Endangered (Atlantic bluefin tuna) and one Critically Endangered (southern bluefin tuna). The IUCN is expected to confirm the results of this assessment in a future update of the Red List. These findings support what many people have already suspected for a while, namely that many species of marlin and tuna are already over-exploited. However, because the methods used in the Red List assessments examine population health at a global level, rather than at the level of individual fisheries, the results give a clearer view of the overall health, or otherwise, of a population.

Source: *Nature news* (2011), <http://www.nature.com/news/2011/110707/full/news.2011.398.html>, and *Science* (2011), <http://dx.doi.org/10.1126/science.1208730>

New sites added to the World Heritage List

The United Nations Educational, Scientific and Cultural Organization's World Heritage List now numbers 936 properties following the inscription of 25 new sites, 21 of which are cultural sites, 3 natural sites and one a mixture of the two. The three new natural World Heritage Sites are the Kenya Lake System in the Great Rift Valley, home to some of the highest bird diversity in the world, the Ningaloo Coast in Australia, which includes one of the world's longest nearshore reefs, and the Ogasawara Islands in Japan, home to the Critically Endangered Bonin flying fox. The mixed natural and cultural heritage site is the Wadi Rum Protected Area in southern Jordan. Human activity in two of the existing natural World Heritage Sites, the Tropical Rainforest Heritage of Sumatra and the Río Plátano Biosphere Reserve in Honduras, has led to their inclusion on the list of World Heritage Sites in Danger.

Source: *UNESCO News* (2011), <http://whc.unesco.org/en/news/776/>

Gloomy outlook for oceans

A group of experts on the oceans, who met in April 2011 for a 2-day workshop, have concluded that there is a risk of losing entire marine ecosystems. The report resulting from the workshop, which was led by the International Programme on the State of the Ocean in partnership with IUCN, demands immediate action, suggesting that if this does not happen, the combined effects on the oceans of climate change, overexploitation, pollution and habitat loss are likely to cause the next globally significant extinction event. Actions to reverse current trends are recommended in four areas: an immediate reduction in the emissions of CO₂, the urgent restoration of the structure and function of marine ecosystems, the use of the precautionary principle, and the introduction of effective governance of the High Seas.

Source: *International Programme on the State of the Ocean* (2011), <http://www.stateoftheocean.org/ipso-2011-workshop-summary.cfm>

Tool developed to correct plant names

A group of botanists have put together an online tool, the Taxonomic Names Resolution Service (TNRS), to find and correct the numerous errors within botanical databases. The concept of the TNRS arose when researchers compiled a data set of records on plants in the Americas, only to discover the data set contained more than twice as many plant names as there are plant species. Errors are thought to arise when names are entered into online databases, with one-third of plant names in such databases estimated to be incorrect. Synonyms also account for some of the extra plant names. The TNRS compares plant names with those listed within the Missouri Botanical Garden's Tropicos database, one of the most authoritative botanical databases for the flora of the Americas. If a name cannot be matched the TNRS uses a fuzzy-matching algorithm to search for misspellings.

Source: *Nature* (2011), 474(7351), 263

Dive below the ocean waves without getting wet

Data collected on research cruises have been used to create maps of the sea-floor, accessible to even the most hydrophobic through Google Earth. The vast majority of

the ocean floor has barely been mapped but these data from oceanographers at Columbia University's Lamont-Doherty Earth Observatory provide a resolution of 100 m for 5% of the ocean floor. Areas that can now be viewed include the Hudson Canyon off New York City, and the 3-km-high Mendocino Ridge off the USA's Pacific Coast. A virtual tour called Deep Sea Ridge 2000 enables viewers to see sea-floor hydrothermal vents and includes information on the organisms that occur there. Mapping the ocean floor is more time-consuming than mapping terrestrial sites, as the latter can be mapped from satellites in a single trip, but every part of the sea-floor has to be visited by ship to create accurate maps.

Source: *Lamont-Doherty Earth Observatory news* (2011), <http://www.ldeo.columbia.edu/news-events/new-google-ocean-maps-dive-down-deep>

Area of sustainably managed forests grows, albeit slowly

The area of tropical forest under sustainable management has grown by 50% in 5 years but still accounts for < 10% of the global tropical forest estate, according to a report by the International Tropical Timber Association. The report shows that some countries, including Brazil, Malaysia and Peru, have made good progress towards sustainable forest management since 2005. In other countries, however, such as Cambodia, Liberia and Guatemala, major conflicts have taken their toll on the development of the institutions required to achieve sustainable forest management, while in other countries such as Nigeria and Papua New Guinea the forest administration does not have sufficient resources to be able to supervise the forest management regime. The report's authors warn that forces that favour forest destruction, including higher food and fuel prices, may overwhelm the forces favouring forest conservation.

Source: *ITTO Press Release* (2011), http://www.itto.int/news_releases/id=2663

Rhino horn worth more than diamonds, gold and cocaine

The UK has secured an international agreement at the 61st meeting of the Standing Committee of CITES in Geneva to curb the illegal trade in rhino horn. The belief that rhino horn has medicinal powers is fuelling demand for the product in Asia and it is

now worth GBP 50,000 per kilo. The UK will lead global talks to fight such misconceptions and, as part of the agreement, policing techniques and awareness campaigns will be shared by countries and conservation groups. Under new rules brought in for the UK and backed by the European Union, export licences for worked items such as ornaments, created and acquired before June 1947, will now only be granted under special circumstances. A workshop to develop better co-operation between countries where rhinos are poached and countries where their horns are sold was held in South Africa in September 2011. *Source: BBC News* (2011), <http://www.bbc.co.uk/news/science-environment-14603905>

The natural world in numbers

A new estimate that the natural world contains c. 8.7 million species has been described as the most accurate ever. However, the vast majority of species have not yet been identified and many will become extinct before they can be studied, warn the research team responsible for the study. The vast majority of the 8.7 million species are animals, with progressively smaller numbers of fungi, plants, protozoa and chromists. The figure excludes bacteria and some other types of micro-organism. The research team from the UN Environment Programme's World Conservation Monitoring Centre, Microsoft Research in Cambridge, UK, Dalhousie University in Canada and the University of Hawaii quantified the relationship between the discovery of new species and the discovery of new higher groups such as phyla and orders, and then used it to predict how many species there are likely to be. *Source: BBC News* (2011), <http://www.bbc.co.uk/news/science-environment-14616161>

Climbing mountains year on year

A recent study has shown animals and plants are shifting their natural home ranges towards the cooler poles three times faster than previously thought. Researchers looked at the effects of temperature on > 2,000 species across Europe, North and South America and Malaysia over the last 4 decades. They reported that species experiencing the greatest warming have moved furthest. On average organisms are shifting their home ranges at a rate of 17 km per decade away from the equator and evidence suggests species are also moving uphill by about 1 m per year. While many species may be able to seek out cooler habitats to stay within their optimal temperature range, rises in temperature pose a serious threat to those already living at the poles or

at the top of mountains where there is simply nowhere left to go. *Source: BBC News* (2011), <http://www.bbc.co.uk/news/science-environment-14576664>, and *Science* (2011), <http://dx.doi.org/10.1126/science.1206432>

EUROPE

Kent otters complete species' comeback

The sighting of otters in two different locations in the county of Kent means that the mammal is now found in every English county. The return of the otter to England is a cause for celebration for conservationists, as it indicates that English rivers are now the healthiest they have been for 20 years. Otters are not the only species returning, with salmon and other species also increasing in English rivers. Otter numbers decreased drastically as the result of toxic pesticides and the species was almost extinct by the 1970s. Since measures were put in place to improve water quality and to protect otters in law, the speed of the otters' return has been remarkable: a recent survey of the river Ribble in Lancashire, for example, showed a 44% increase in otters since 2008. *Source: BBC News* (2011), <http://www.bbc.co.uk/news/uk-england-14557381>

New certification scheme for sustainable biofuel use

The European Commission has approved seven schemes set up by private companies and institutions to ensure biofuels used in the EU are produced in an environmentally sustainable way. Although biofuels are part of the EU strategy to cut CO₂ emissions their use is controversial and may pose a threat to biodiversity. In some developing countries forests have been cleared to make way for biofuel crops and they are seen to rival food crops in existing agricultural areas. Each scheme will verify where and how biofuels are produced and biofuels grown on land that was previously forest or wetland will not qualify. Companies importing or producing biofuels will be required to prove that they meet the EU's tough new criteria. Furthermore, to gain approval biofuels will have to emit at least 35% less greenhouse gases than fossil fuels and this percentage will rise over the next few years. *Source: BBC News* (2011), <http://www.bbc.co.uk/news/world-europe-14205848>

Cities can act as carbon stores

Despite growing rates of urbanization little research has attempted to quantify and map ecosystem services at a city-wide scale.

Now researchers have done this in a typical British city, Leicester, by examining vegetation across the entire urban area, as well as looking at how carbon density differs in domestic gardens and public land. The findings show that Leicester stores c. 230,000 tonnes of carbon in its above-ground vegetation, which equates to 3.16 kg C m⁻². The vast majority of this carbon, 97.3%, is associated with trees rather than herbaceous and woody vegetation; gardens were found to store a mere 0.76 kg C m⁻² whereas the greatest above-ground carbon density was 28.86 kg C m⁻², found in areas with tree cover on publicly owned/managed sites. These figures are an order of magnitude greater than current national estimates of Leicester's carbon storage contribution. *Source: Nature* (2011), 475(7356), 268, and *Journal of Applied Ecology* (2011), <http://dx.doi.org/10.1111/j.1365-2664.2011.02021.x>

Pharmaceutical factories appear to be contaminating rivers

A number of studies carried out on three continents appear to show that effluent from pharmaceutical factories may be contaminating nearby water bodies, despite the existence of stringent environmental regulations and standards. The most recent study to add to this finding comes from France, where wild gudgeon populations in a river close to a pharmaceutical factory producing steroid compounds were investigated after anglers reported seeing abnormal fish in the area. Downstream of the factory an average of 60% of fish were found to have both male and female sexual characteristics, while upstream only 5% of fish displayed intersex characteristics. Furthermore, male fish living downstream also had higher blood levels of a protein normally found in fish eggs. It is not clear how these compounds ended up in the river, and also how widespread these problems are, as no effects have been observed in other fish species.

Source: Nature (2011), 476(7360), 265

Ecosystem services declining in UK

A newly-released report by the UK National Ecosystem Assessment has found that c. 30% of ecosystem services in the UK have declined over the last 60 years and others are considered to be in a reduced or degraded state. Furthermore, the report's authors warn that, as the UK's population continues to grow, pressures on the country's ecosystem services will increase. The authors urge the UK government to use the report's findings in future policy-making. The Assessment divided the UK into eight habitat types, and assigned a value to each habitat type, based on both market goods

(such as food production) and non-market goods (such as spiritual inspiration). The report's findings were not all negative, with 20% of ecosystem services, including crop production and species diversity in woodlands, found to be improving.

Source: *Nature* (2011), <http://dx.doi.org/10.1038/news.2011.339>

Iberian lynx not doomed by low genetic diversity

Recent research suggests that one of the most endangered wild cats, the Iberian lynx, has had little genetic variability over the last 50,000 years, and surprisingly this has not hampered its long-term survival. Although only about 250 Iberian lynx remain in the wild it is now thought that the species is not at risk of low genetic diversity and inbreeding, as previously believed. The research team from Spain, the UK and Sweden looked at the mitochondrial DNA of several lynx, and found that there was, as expected, little genetic variation. But when they compared this with mitochondrial DNA from lynx fossils spanning the last 50,000 years, they found that there was hardly any variation between the ancient specimens and modern-day individuals. While it is still not clear how the Iberian lynx has managed to survive with low genetic diversity the research dispels the myth that certain species are doomed by their genetics. Source: *BBC News* (2011), <http://www.bbc.co.uk/news/science-environment-14563807>

Killing of birds in Europe widespread

Contrary to popular opinion, illegal trapping and killing of wild birds is not restricted to Mediterranean countries in Europe, as demonstrated by a report by BirdLife partners. The report reveals that the illegal killing of birds is a widespread practice that few countries have managed to stop. Despite the European legislation that aims to protect wild birds from persecution being over 30 years old, birds are still being killed in a number of different ways and for various reasons. Often, birds are killed for economic reasons; for example, because they are seen to be competing for resources. The report also notes a worrying increase in the number of birds being targeted through poisoning, an indiscriminate means of killing that has negative effects on both wildlife and people. The report's launch was accompanied by specific recommendations for addressing this issue aimed at governments and civil society.

Source: *BirdLife International News* (2011), <http://www.birdlife.org/community/2011/07/birdlife-report-reveals-disturbing-facts-about-illegal-killing-of-birds-throughout-europe/>

Thames in Top Ten...

The Environment Agency (EA) has released a list of the 10 most-improved rivers in England and Wales. Officially declared a sewer in the 1960s the River Wandle in London appears on the list, which also includes the River Nar in Norfolk, the River Darent in Kent, and the River Taff in South Wales. Other entries include the Thames in London, which was declared biologically dead in the 1950s, and the River Stour in Worcestershire, previously known for the rainbow-coloured dyes that flowed into it from carpet manufacturing. A representative from the EA believes river habitats have benefited from the agency's work with farmers, businesses and water companies to reduce pollution and improve water quality. River habitats have also benefited from reductions in the volume of water taken for industrial and agricultural use, and the resultant increase in river flow has enabled them to support larger populations of wildlife.

Source: *BBC News* (2011), <http://www.bbc.co.uk/news/uk-14710478>

...and habitat restoration key for returning salmon

Genetic data collected from returning Atlantic salmon in the River Thames suggests that habitat restoration is more effective than species re-introduction. Researchers have found that salmon ascending the Thames are more likely to be fish that have come from nearby rivers than as a result of costly restocking efforts made from the late 1970s onwards. Since 2005 no hatchery-reared salmon have been caught in the Thames. Furthermore, researchers found that wild salmon returning to the Thames between 2005 and 2008 did not originate from exogenous fish stocked into the river. Historically, the Thames had a significant salmon population and a substantial fishery existed on the river until the early 19th century. However, subsequent industrialization and urbanization of London led to increased levels of pollution and the last record of the species had previously been made in 1833. The presence of salmon in the Thames today highlights the importance of improved habitat and water quality for the success of long-term stocking.

Source: *BBC News* (2011), <http://www.bbc.co.uk/nature/14719203>, and *Conservation Biology* (2011), <http://dx.doi.org/10.1016/j.biocon.2011.07.017>

NORTH EURASIA

Ecotourism and spoon-billed sandpiper conservation

Ecotourists aboard Heritage Expeditions' *Spirit of Endeby* in the Russian Far East

recently participated in the discovery of a previously unknown breeding population of the spoon-billed sandpiper. The costs of mounting searches for the bird in the remote coastal expanses of Arctic Russia have previously been prohibitive but with careful planning in conjunction with BirdLife and Birds Russia, the Heritage Expedition's vessel provided the ideal access solution. Participating teams of passengers, guides and crew were thoroughly briefed in advance by the Spoon-billed Sandpiper Task Force on how to undertake surveys with minimal environmental impact and each team was led by staff experienced in avoiding disturbance to nesting birds. The main spoon-billed sandpiper study site is further north at Meinyopil'gyno where a conservation breeding programme for the protection of the species started this year.

Source: *BirdLife International News* (2011), <http://www.birdlife.org/community/2011/07/birdlife-species-champions-strike-gold-in-chukotka/>

Plan to reintroduce tigers to Kazakhstan

A new plan by WWF in Russia and the government of Kazakhstan, which aims to reintroduce tigers to Kazakhstan, could result in the first tigers roaming through central Asia since the extinction of the Turan, or Caspian, tiger from the area in the 1970s. The reintroduction plan aims to move Amur tigers from the Russian Far East to an area of Kazakhstan, south of Balkhash Lake. The Amur tiger is genetically identical to the Turan tiger, according to analysis of its genome. The Turan tiger is thought to have become extinct from poaching and habitat loss, but hopes are high for this project, with the Russian prime minister, at the International Tiger Conservation Forum held in St Petersburg in November 2010, having expressed a willingness to support a reintroduction programme in Kazakhstan.

Source: *WWF News* (2011), http://www.wwf.org.uk/wwf_articles.cfm?unewsid=4849

Horses poached from Chernobyl exclusion zone

A population of Critically Endangered Przewalski's horses, released into the Chernobyl exclusion zone in 1998 and 1999 to enrich the biodiversity of the area, has been dwindling, and there are fears they are being poached for meat. The number of horses in the exclusion zone appears to have fallen to 30–40 individuals from a maximum number of 65 in 2003. Speculation continues as to the reasons behind the decrease, with

suggestions that wolves or disease may be to blame. The poverty of the local population, however, combined with the presence of a ready supply of horse meat in the exclusion zone, indicates that poaching is the most likely reason for the decline. The lack of research in the area makes accurate population counts of the Przewalski's horses difficult, with no accurate counts of the population having been carried out for the last 3 years.

Source: *BBC News* (2011), <http://www.bbc.co.uk/nature/14277058>

NORTH AFRICA AND MIDDLE EAST

From cultural icon to symbol of hope

Fears that Syria's current political unrest may have had a negative impact on the only known breeding pair of northern bald ibis in the Middle East have proved unfounded. For the first time in the last 3 years the remaining pair of this Critically Endangered species has successfully reared two healthy young. Historically, the bird has been an important cultural and religious icon in the Middle East and had special significance for the Egyptian Pharaohs. More recently the wild population of the species was thought to be extinct but in 2002 birds were found in the mountains of Syria, near Palmyra (see *Oryx*, 38, 106–108, and 43, 329–335). The only other nesting population of northern bald ibis occurs at two coastal locations near Agadir, Morocco and consists of just over 100 breeding pairs. Research using tracking devices has revealed that the Syrian adult birds head to the highlands of Ethiopia to spend the winter but where the juveniles go still remains a mystery.

Source: *RSPB Press Release* (2011), <http://www.rspb.org.uk/news/284815-success-for-middle-east-rarest-bird-despite-syrian-unrest>

Tourists make monkeys jumpy

Ecotourism is often touted as an activity with the potential to support conservation but new findings from Morocco add to growing evidence that species may suffer increased stress in the presence of tourists. Researchers used a behavioural index to examine anxiety in wild Barbary macaques and measured their physiological stress levels using the levels of certain hormones in the macaques' faeces. The researchers found that anxiety levels in the primates increased with higher tourist numbers and in the case of interactions with tourists, even when these interactions

were limited to innocuous activities such as photography. However, it was only in the case of aggressive interactions with humans that the levels of stress hormones in the monkeys' faeces increased. These findings will be of use in drawing up guidelines to aid management of sites where tourists and wild primates interact.

Source: *New Scientist* (2011), 211(2819), 16, and *Biological Conservation* (2011), <http://dx.doi.org/10.1016/j.biocon.2011.05.010>

Frog rescue in Iraq

A sergeant in Iraq who rescued a lemon-yellow tree frog from a latrine on a US military base near Al Bakr has contributed a photo of the species and its location to the Global Amphibian Blitz project, which aims to carry out a census of all amphibian species. The project, a joint project of Amphibiaweb, The Smithsonian Conservation Biology Institute, The Amphibian Specialist Group and The Amphibian Ark, uses web 2.0 technology to allow people to upload photos of amphibians from their cameras or smart phones. In the case of the lemon-yellow tree frog found by the sergeant in Iraq, previous estimates for the species put its range further north of where he found the individual, indicating the usefulness of the data being assimilated through the Global Amphibian Blitz project.

Source: *Climate Central* (2011), <http://www.climatecentral.org/blogs/sergeant-saves-frog-in-iraq-project-global-amphibian-blitz/>

SUB-SAHARAN AFRICA

High species diversity traded at South African market

A survey of the animal species being traded at South Africa's second largest outlet for traditional medicine, Faraday market in Johannesburg, found evidence of 147 different species of vertebrate being sold. This equates to c. 9% of the vertebrate species that occur in South Africa, excluding domesticated animals. The majority of species were mammals (60 species), then birds (53), reptiles (33) and amphibians (1), with mammal body parts and bones the most commonly sold items. The majority of species being traded (87.5%) were categorized as Least Concern on the IUCN Red List but 17 species of conservation concern were found to be on sale, including the skull of a Critically Endangered hawkbill turtle and a skull of an Endangered wild dog. Significantly more traders than expected were selling at least one species of

conservation concern, and the study's authors recommend that this be monitored. Source: *Journal of Zoology* (2011), <http://dx.doi.org/10.1111/j.1469-7998.2010.00784.x>

Madagascar's species richness highlighted in new report...

Anyone wanting to discover a new species could do worse than heading for Madagascar, where an extraordinary 615 new species have been described over the last decade. This includes 385 plants, 42 invertebrates, 17 fish, 69 amphibians, 61 reptiles and 41 mammals. Madagascar's long isolation from its neighbouring landmasses has resulted in the evolution of a high degree of endemism within its fauna and flora, with over 70% of Malagasy species endemic to the island. Among some groups this figure is even higher, with 99% of Malagasy amphibians, for example, being endemic. The new species discovered between 1999 and 2010 include the excellently camouflaged cork bark leaf-tailed gecko, the largest species of giant golden orb spider yet recorded, and 12 new species of orchid. Source: *Treasure Island: New biodiversity on Madagascar (1999-2010)* (2011), <http://www.worldwildlife.org/what/wherework/madagascar/WWFBinaryitem21486.pdf>

...but enforced wildlife exodus continues

Officials at Antananarivo's airport have seized a shipment of nearly 200 of the rarest tortoises, bound for Jakarta via Nairobi and Dubai. The haul consisted of 26 ploughshare tortoises, 169 radiated tortoises and one spider tortoise, all of which are categorized as Critically Endangered on the IUCN Red List and are endemic to Madagascar. The tortoises were packed into a box and three large bags, and were carried directly onto the tarmac, thus avoiding security scanners. Two men, one a Malagasy and the other an Indian national, were arrested at the airport. Trade in all three species of tortoise is banned under CITES but these species are regularly seen for sale in markets in South-East Asia. The presence of 26 ploughshare tortoises in the shipment is particularly significant, as there are only estimated to be between 440 and 770 individuals of this species left in the wild. Source: *TRAFFIC News* (2011), <http://www.traffic.org/home/2011/7/27/malagasy-frontier-police-seize-indonesia-bound-shipment-of-w.html>

Ivory goes up in smoke

Nearly five tonnes of ivory, worth GBP 9.9 million, has been burnt following an

agreement by Malawi, Tanzania and Kenya to strengthen law enforcement efforts to end wildlife smuggling. The contraband ivory, seized almost 10 years ago in Singapore, was returned to Kenya where DNA testing revealed the stockpile had originally come from Malawi and Tanzania. Some 335 tusks and more than 40,000 ivory carvings went up in smoke during a ceremony held in the Munyani region of eastern Kenya. The ivory was set alight in July by Kenya's President, Mwai Kibaki, in a move to demonstrate the determination of the three countries to curb poaching and illegal wildlife trading. The commercial trade in ivory has been banned under CITES since 1989.

Source: *BBC News* (2011), <http://www.bbc.co.uk/news/world-africa-14217147>

Serengeti road will not be built...

The Tanzanian government has announced that it will reconsider the controversial North Road project, which threatened to divide the Serengeti and thus seriously disturb animal migration patterns in the area. Instead of tarmacking the 53 km of road the alternative is to leave it as a gravel track for use for tourism and administrative purposes, under the jurisdiction of Tanzania National Parks. This announcement by the Tanzanian government was made at the most recent session of the UNESCO World Heritage Committee, and the Committee has called on the international community to provide support for an alternative route to the south of Serengeti National Park and Ngorongoro Conservation Area. The World Heritage Centre and IUCN undertook a joint mission to Serengeti National Park in December 2010, which concluded that the road potentially threatened the outstanding universal value of the Park.

Source: *UNESCO World Heritage Centre News* (2011), <http://whc.unesco.org/en/news/769>

...but Tanzania eyes Selous Game Reserve for uranium

The Tanzanian government's natural resources minister has reassured the recent UNESCO World Heritage Centre meeting that the government's plans to mine uranium in the Selous Game Reserve, a World Heritage site, will affect < 1% of the Reserve's area. Mining firms could expect to earn USD 200 million every year from mining uranium in the area, and it is estimated that c. 1,600 Tanzanians could benefit from the increased job opportunities. In addition, USD 5 million of the mining profits would go to the government, and could help with the running costs of the Reserve. While the minister said that Tanzania did not need the UN's approval to go ahead with the mining plans, a spokes-

man for UNESCO said it would be regrettable if Tanzania commenced with uranium mining without UNESCO's approval.

Source: *BBC News* (2011), <http://www.bbc.co.uk/news/world-africa-13989264>

SOUTH AND SOUTH-EAST ASIA

Vocal gibbons call for protection

A recent census, using auditory sampling techniques to gather data, has identified the largest known remaining population of the northern white-cheeked crested gibbon in Vietnam. The Critically Endangered gibbons use prolonged and elaborate vocalization to communicate territorial boundaries and sing to attract a partner and maintain pair bonds. The species' loud morning calls were used by researchers to locate a population of 455 individuals living in 130 groups in the Pu Mat National Park. The gibbons were discovered in remote, dense forest at high altitudes on the Vietnam-Lao PDR border and represent the only confirmed viable population of the species. Road development near the border may pose a threat to the primates in the future and researchers from Conservation International are urging for high priority to be given to Pu Mat National Park, not only for its species' biodiversity but also as a stronghold for global gibbon conservation.

Source: *Conservation International Press Release* (2011), <http://www.conservation.org/newsroom/pressreleases/Pages/Critically-Endangered-Gibbon-Discovered-Vietnam.aspx>

Collaborative approach key to project success

A 2-year pilot project aimed at disrupting the wildlife trade along key supply and distribution routes in the central Annamites region of Vietnam has recorded encouraging results. A total of 88 illegal wildlife trade confiscations took place and total fines amounted to 178,000,000 VND (9,000 USD). Over 730 animals were released back into the wild and > 900 kg of wildlife meat was seized and destroyed. Law enforcement efforts were particularly effective because they were targeted at a major wildlife trade route in Thien Hue Province known as the Hai Van pass. The positive outcomes of the project were maximized as a result of a multi-agency collaborative approach, involving key agencies such as the provincial Environmental Police and Forest Protection Department. The joint WWF-TRAFFIC pilot programme ended in June 2011 but it is hoped that the project model will be replicated at other strategic sites across Vietnam.

Source: *TRAFFIC News* (2011), <http://www.traffic.org/home/2011/6/29/targeting-bottleneck-proves-effective-in-curbing-illicit-tra.html>

120 kg of dried turtles seized in Bangladesh

Officials in Bangladesh have intercepted more than 120 kg of dried turtles near the country's north-western border with India, although the smugglers themselves escaped after troops from Border Guard Bangladesh gave chase. This is the largest haul ever seized in the border region, and comes at a time when the smuggling of live and dried turtles through Bangladesh appears to be on the increase. Researchers familiar with patterns of trade in the region speculate that the dried turtles, which possibly originated in north-west India, may have been on their way to East Asia, where they are in demand for medicinal uses. One kilogram of dried turtle is estimated to cost c. USD 140 on the international market.

Source: *BBC News* (2011), <http://www.bbc.co.uk/news/world-south-asia-13928837>

Two tonnes of pangolins confiscated in Indonesia

The latest in a series of attempts to smuggle pangolins out of Indonesia has resulted in the seizure of 1,732 kg of pangolin meat and 380 kg of pangolin scales at Sukarno-Hatta airport in Jakarta. One of the smugglers was arrested and faces up to 5 years in prison if convicted. The pangolins, which had been descaled, were destined for Singapore and packed in boxes labelled as fresh fish. This latest seizure follows the discovery of 7.5 tonnes of pangolins at Indonesia's largest port in May. Indonesia is not the only country to be experiencing attempts to smuggle pangolins, with seizures also reported from Cambodia, India, Malaysia, Nepal, Thailand and Vietnam in 2011. Demand for pangolins, which are protected throughout their range and trade in which is prohibited, is high in East Asia, particularly in China and Vietnam, as pangolins are valued both for consumption and for use in traditional medicine.

Source: *TRAFFIC News* (2011), <http://www.traffic.org/home/2011/7/18/2-tonnes-of-pangolins-seized-in-indonesia.html>

Siamese crocodiles hatch in Lao PDR

Twenty Siamese crocodiles have hatched as part of a breeding programme aiming to protect both this Critically Endangered reptile and the wetlands in which it occurs. The hatchlings are part of the second phase of the Crocodile Resource Management Plan, a project being coordinated by the Wildlife Conservation Society working with

the government of Lao PDR. The first phase involved surveys of crocodiles, their wetland habitats and the livelihoods of the local communities in Savannakhet Province, where the crocodiles occur. The 20 hatchlings were removed from wild nests and incubated at the Laos Zoo. They will be kept in captivity until they are 2 years old, at which point they are deemed to be large enough to stand a good chance of surviving in the wild. Siamese crocodiles previously occurred throughout South-East Asia and parts of Indonesia but have undergone a significant reduction in numbers as a result of over-hunting and habitat fragmentation and loss. *Source: WCS Press Release* (2011), <http://www.wcs.org/press/press-releases/siamese-crocodiles.aspx>

EAST ASIA

New project developed to protect wild plants in Japan

A new project, developed by TRAFFIC, aims to promote sustainable production and consumption of wild plants used in Japanese culture. A 2007 study found Japan to be the fourth largest importer, in terms of value, of medicinal and aromatic plants, with many of the plants being imported from Asia. Wild plants are used for a variety of purposes in Japanese culture, including for traditional medicine, as incense, and in herbal teas. The new project aims to support Japanese companies to introduce responsible production and sourcing practices for wild plant ingredients. Consumers will also be encouraged to choose sustainably sourced products. Recent growth in environmental awareness and the desire for a healthy lifestyle in Japan underline the importance and timeliness of this project.

Source: TRAFFIC News (2011), <http://www.traffic.org/home/2011/6/23/sustainable-sourcing-sought-for-wild-plant-industry-in-japan.html>

NORTH AMERICA

Better management of ecological data recommended by US report...

A report by the American President's Council of Advisors on Science and Technology has found that data on natural resources are not managed in a centralized manner, with only 11 of 55 national monitoring programmes publishing their data in the federal government's data clearing-house. The inaccessibility of these data makes it hard to address and reverse degradation of the USA's natural capital, and the

report calls for these data to be made available to people in both the private and public sectors to ensure the country's natural resources are managed in the most effective way possible. The report's authors recommend the setting up of an online searchable, integrated database, EcoINFORMA (Ecoinformatics-based Open Resources and Machine Accessibility), to make federal data on environmental health and ecosystem value accessible to researchers, businesses and public policy officials.

Source: Nature newsblog (2011), http://blogs.nature.com/news/2011/07/report_calls_for_better_ecolog.html

...while States-wide monitoring programme ready to roll

After years of planning and discussion the USA is preparing to proceed with a nationwide environmental monitoring programme. The National Ecological Observatory Network (NEON) will collect data from 20 observatories located within distinct ecoregions in the USA, such as the Pacific North-west, the Central Plains and the Great Lakes. In addition, NEON is equipped with temporary data collection stations that can be relocated as required. Although NEON has been in development for over a decade, a grant of USD 434 million from the National Science Foundation in July 2011 provided the capital needed to jump-start the programme. Data collection will commence in Colorado, near the NEON headquarters, and will expand from there. Once the network is complete, over 15,000 sensors will collect data on c. 500 different categories of information, including basic weather readings, ozone concentrations, and nitrogen levels in soil, air and water.

Source: Nature (2011), 476(7359), 135

Fluctuating currents may boost ocean productivity

Ocean currents, such as the North Pacific Current off the western coast of the USA, are expected to move north as the climate changes. Movement of ocean current positions can affect ecosystem dynamics but this has not been studied directly until now. Researchers from California combined data from floating ocean sensors with a suite of ecosystem indicators to examine the relationship between the position of the North Pacific Current and ecosystem attributes from 2002 to 2007. The results indicate that when the Current moved north, the biological productivity and biomass along coastal California increased. This finding suggests that changes in climate may be beneficial for species along the USA's western coast, including the fisheries located in this area.

Source: Nature (2011), 475(7354), 8, and *Geophysical Research Letters* (2011), <http://dx.doi.org/10.1029/2011GL047212>

Movements of top marine predators tracked

The Tagging of Marine Predators, a programme of the Census of Marine Life, has built up a database of the movements of 23 species from seven top-predator guilds (albatrosses, pinnipeds, roqual whales, sharks, shearwaters, tuna and turtles) in the North Pacific Ocean. The programme used 4,306 electronic tags to collect the data, which cover 265,386 tracking days from 2000 to 2009. Various sites in the Pacific were confirmed as biological hot-spots, with high concentrations and residency of multiple marine predators. In particular, the California Current large marine ecosystem and the North Pacific transition zone were found to attract a large number of these top predators, and the study's authors recommend ecosystem-based management within the California Current large marine ecosystem, and that a conservation corridor be extended across the North Pacific transition zone.

Source: Nature (2011), <http://dx.doi.org/10.1038/nature10082>

Tar sands monitoring plan published

The Canadian government's plan to mine tar sands in Alberta is a matter of concern for environmentalists, given the amount of energy required for the operation and the potential effects on ground cover and water. Now the Canadian government has published a monitoring plan to track the environmental effects of tar sands mining, including the effects on water, air and biodiversity. The federal monitoring plan includes details on what should be monitored and when, as well as information on how often monitoring should take place, recommending continuous monitoring of some gas emissions and particulate matter, and spot sampling of fish, birds and mammals. The cost of the monitoring programme is estimated to be USD 50 million per year, and there are concerns that the high cost may hamper the programme's execution, particularly as provincial and federal environmental departments have had their budgets cut.

Source: Nature newsblog (2011), http://blogs.nature.com/news/2011/07/canada_releases_tar_sands_moni_1.html

Caribou not so tasty for wolves after all

Wolves have been blamed for a decrease in caribou numbers in parts of the USA, leading to calls for a cull of wolves to protect caribou.

Now a study that analysed the faeces of caribou, moose and wolves from the Alberta oil sands in western Canada has found that wolves prefer to prey on deer. The scat analyses were used to estimate resource selection and to examine physiological stress, as well as build up a picture of the populations of the three species in the Alberta oil sands. Caribou populations were found to be more than double previous estimates for the region, but human activity was found to have a significant impact on the area's caribou. The authors recommend that, rather than removing wolves, efforts to manage this ecosystem should focus on modifying landscape-level human-use patterns.

Source: *Frontiers in Ecology and the Environment* (2011), <http://dx.doi.org/10.1890/100071>, and *Nature* (2011), 474(7353), 545

Marsh restoration fails in Louisiana

The restoration of Louisiana's coastal wetlands is one of the lengthiest and most costly environmental remediation projects ever carried out, involving 19 years' worth of freshwater diversion from the Mississippi River into the shrinking wetlands. Now an analysis of satellite images of the wetlands has shown that neither relative vegetation nor overall marsh area increased between 1984 and 2005, with most plant growth consisting of floating plants and algae, not the deep-rooted marsh plants that act as soil stabilizers. The effects of the lack of deep-rooted plants were observed after Hurricanes Katrina and Rita, when the studied areas of wetland suffered severe losses of vegetation, while nearby reference sites suffered only moderate damage and recovered with time. The authors suspect that the influx of nutrients within the river water may be to blame for the lack of below-ground biomass of marsh plants.

Source: *Nature* (2011), 476(7359), 128, and *Geophysical Research Letters* (2011), <http://dx.doi.org/10.1029/2011GL047847>

How safe is mist netting?

Capturing birds using mist nets to monitor behaviour, movement or demographics is one of the most common research techniques used in ornithology. Results of the first large-scale study into bird capture techniques have revealed that birds are rarely injured or killed by mist netting. Data obtained from banding organizations across the United States and Canada, spanning > 20 years of research and featuring 188 species of birds, was used to assess the risk factors that could increase rates of injury or mortality, including bird size, age, frequency of capture and the role of predators. Of 620,997 captures the percent-

age of incidents of injury amounted to 0.59% and only 0.23% of captures resulted in mortality. Furthermore, researchers found that frequently captured birds are at less risk of injury compared to birds captured only once by mist netting and concluded that the long-term impact of the technique is minimal.

Source: *Methods in Ecology and Evolution* (2011), <http://dx.doi.org/10.1111/j.2041-210X.2011.00123.x>

Leopard frog makes show-stopping re-entrance

A phylogenetic investigation of museum specimens of the extinct Vegas valley leopard frog has discovered that this leopard frog is genetically indistinguishable from a population of federally threatened Chiricahua leopard frogs that occurs in central Arizona, 400 km away from the Vegas frogs' original home. Populations of the Chiricahua leopard frogs from further south-east in their range are thought to be a separate species. The discovery poses a problem for conservationists, who are restoring the Las Vegas Creek, from which the Vegas valley frogs were extirpated during the 1940s when the creek was drained to build Las Vegas. Researchers had intended to translocate the severely threatened relict leopard frog to the restored Las Vegas Creek, but the reappearance of the Vegas valley leopard frogs raises questions as to which species of leopard frog should be reintroduced to the Creek.

Source: *New Scientist* (2011), 210(2817), 7, and *Conservation Genetics* (2011), <http://dx.doi.org/10.1007/s10592-011-0229-6>

Citizen science proves successful in Texas

A study into the efficacy of a citizen science programme in Texas, which trains members of the public to detect the presence and spread of invasive plant species, has found that the data collected by these citizen scientists are robust and can be used by professional researchers. Volunteers taking part in the programme record information about invasive species encountered in their local area into an online, state-wide mapping database. The study's authors looked at previously recorded observations of the invasive giant reed in Texas and compared these observations to those collected by Invaders of Texas volunteers. The comparison revealed a spread in the overall distribution of the reed. A further comparison between the Invaders of Texas programme and a similar programme, the Invasive Plant Atlas of New England, supports the view that, with adequate training, citizen scientists have a useful role to play in the collection of data on invasive plants.

Source: *BioScience* (2011), <http://dx.doi.org/10.1525/bio.2011.61.6.8>, and *Invaders of Texas* (2011), <http://www.texasinvasives.org/>

Short-tailed albatross fledges from Midway Atoll

The first short-tailed albatross to hatch on Midway Atoll, in the Hawaiian archipelago, has left its natal home and is now not expected to return for 4–6 years. The chick, which hatched in January 2011 and survived being washed from its nest in March as the tsunami from the Japanese earthquake swept the atoll, is the first short-tailed albatross to be produced outside the Japanese island of Torishima, the breeding stronghold for this species. Researchers suspect that the use of decoy short-tailed albatrosses, and the playing of recordings of the species, may have been instrumental in encouraging the pair to nest on Midway Atoll. Ten adult, and six immature, models of short-tailed albatrosses were employed on Midway Atoll, replicated from an original model by a Japanese wild bird carver.

Source: *BirdLife International News* (2011), <http://www.birdlife.org/community/2011/07/midway%E2%80%99s-first-short-tailed-albatross-chick-survives-tsunami-to-fledge/>

Invasion of alien worms

A recent study focused on the forests of North America suggests that invasive earthworms can alter the carbon and nitrogen cycle in woodland and also pose a threat to native plant species. Researchers found that the presence of non-native worms in temperate hardwood forests accelerated the decomposition of forest litter and led to an increased risk of soil erosion. It is thought human activity such as horticulture and land disturbance is the primary cause of dispersal of non-native worms, as well as being moved on vehicles' tyres and through composting and the improper disposal of fish bait. Elsewhere, within parts of Europe, the common earthworm is struggling to compete against flatworms introduced from Australasia. Furthermore, a study conducted earlier this year found earthworms had a net benefit in terms of locking carbon into the soil of tropical forests.

Source: *BBC News* (2011), <http://www.bbc.co.uk/news/science-environment-14788783>, and *Human Ecology* (2011), <http://dx.doi.org/10.1007/s10745-011-9422-y>

US trade sanctions possible against Iceland over whaling

The US commerce secretary has formally told President Obama that the Icelandic whale hunt poses a threat to the

Endangered fin whale. The President has 60 days to provide a response, which could include trade bans. Iceland hunts c. 150 fin whales per year and claims that its whaling activity is based on sound science, with the whalers targeting fin whales from the healthy North Atlantic stock and not the threatened populations in the Southern Ocean. Much of Iceland's fin whale meat is exported to Japan, and poor market conditions in Japan mean that no whales have been hunted so far in 2011, although the company behind the whaling intends to resume hunting once the market improves. While it seems unlikely that President Obama will impose trade sanctions against Iceland, the commerce secretary has recommended a number of measures, including reviewing any projects in which the US cooperates with Iceland.

Source: *BBC News* (2011), <http://www.bbc.co.uk/news/science-environment-14223673>

Chesapeake Bay's dead zone growing

An underwater dead zone that poses a threat to the wildlife of Chesapeake Bay is on track to be the largest of its kind in the history of the Bay. By late June 2011 the zone covered one-third of the Bay's area, with subsequent reports indicating that it is still growing. Dead zones, the result of a lack of oxygen in the water, form on a yearly basis in the Bay, and are mainly caused by nutrient pollution. This year the flow of water into the Bay was larger than normal as a result of heavier-than-normal rains and snow melt. In May as much pollution entered the Bay from the Susquehanna River as would normally be expected in a whole year. Chesapeake Bay is the largest estuary in the United States and acts as a nursery for many species of fish, as well as supporting large numbers of oysters and other shellfish.

Source: *Washington Post* (2011), http://www.washingtonpost.com/national/health-science/alarmed-dead-zone-grows-in-the-chesapeake/2011/07/20/gIQABRmKXI_story.html

CENTRAL AMERICA AND CARIBBEAN

Back from the brink of extinction

Continued efforts to save the Grand Cayman blue iguana from extinction means the species now has a chance for complete recovery. The Blue Iguana Recovery Program, a consortium of local and international partners coordinated by the National Trust for the Cayman Islands, has success-

fully released > 500 captive-bred individuals. At the time of the Program's inception in 2002 the wild population of Grand Cayman blue iguanas was estimated at only 12–25. The release of iguanas in protected areas on Grand Cayman will continue until their numbers reach c. 1,000 at which time they will be monitored to ensure they are reproducing in numbers required to maintain the wild population. Recovery efforts to save the Grand Cayman blue iguana have mostly centred on the Salina Reserve on the eastern side of the island. This year, however, the iguanas will be released in a newly established protected area, the Colliers Wilderness Reserve.

Source: *ScienceDaily* (2011), <http://www.sciencedaily.com/releases/2011/07/110718141038.htm>

Amphibian fungus reaches remote peaks in Darien

Chytridiomycosis, the fungus responsible for widespread amphibian mortality, has been found in a site near Panama's Darien region, the last area of the entire mountainous neotropics previously free of the disease. In 2007 49 frogs at a location on the border of the Darien National Park all tested negative for the fungus but a survey in the same location in January 2010 found that 2% of 93 frogs were infected. The spread of chytridiomycosis to the Darien region has occurred faster than predicted, and means that researchers working on the conservation of the area's amphibian populations are having to prioritize on which species to focus their efforts. Three species have already been bred in captivity, including the Critically Endangered Panamanian golden frog, which has not been seen in the wild since 2008, but there is currently only limited capacity to house additional species in ex situ facilities.

Source: *Smithsonian Institution News Release* (2011), <http://newsdesk.si.edu/releases/smithsonian-scientists-find-deadly-amphibian-disease-last-disease-free-region-central-ameri>

Hawksbill turtles tracked down to inshore location

A previously undetected hawksbill turtle habitat has been discovered by a team of researchers tracking the species in El Salvador, Honduras, Nicaragua and Ecuador. The inshore estuaries of the mangrove forests of the Eastern Pacific, where the turtles have been found, could represent an important breeding and nesting site for the Critically Endangered species. Despite many studies focusing on marine turtles in the region, the hawksbill turtles had successfully evaded detection. Why the

turtles are now to be found in this unique coastal tree and shrub habitat is as yet unclear. The researchers believe it could be a recent adaptation brought on by a lack of their more typical coral reef habitat in the region. It is hoped the discovery will inform marine turtle conservation efforts and future research in the Eastern Pacific. Source: *BBC News* (2011), <http://www.bbc.co.uk/nature/14735144>

SOUTH AMERICA

Not just humans attracted to Chanel No. 5

Chemical attractants are used in studies examining population densities and relative abundance of carnivores, as well as in environmental enrichment of zoo enclosures. However, commercially available attractants are expensive and difficult to obtain outside the USA. Now researchers have tried out a number of commercial fragrances on jaguars in a Bolivian zoo to identify whether any of these fragrances could be a suitable alternative to the tailor-made carnivore attractants. The jaguars' response was observed to be most marked when their cages contained Chanel No. 5, with some jaguars even falling asleep embracing the scent-containing lure. The researchers suggest that their findings could be useful in camera trapping studies and in cases where an animal needs to be captured for radio-transmitter fitting.

Source: *Cat News* (2011), 54, 30–31

Bumper crop of froglets in captive breeding programme

A breeding programme in a zoo in Santiago, Chile, for the Vulnerable Darwin's frog, is celebrating its second batch of hatchlings. Darwin's frog is one of only two species of amphibian in which the young are reared inside vocal sacs. The female frogs lay fertilized eggs on damp ground and, once the tadpoles hatch, the male takes them into his mouth and manoeuvres them into his vocal sac, via a small opening underneath his tongue. The tadpoles continue their development within the vocal sac, a process that takes c. 60 days, at which point the young frogs are coughed up by the male. Darwin's frogs are native to the southern temperate forests of Chile and Argentina, a habitat increasingly under threat from conversion to vineyards and pine plantations. The chytrid fungus has also recently reached southern Chile, posing an additional threat to the area's beleaguered amphibians.

Source: *mssc.com* (2011), http://cosmiclog.msnbc.msn.com/_news/2011/06/03/6780149-captive-male-frog-coughs-up-babies

New monkey found in the Amazon rainforest

A survey undertaken in December 2010 in an unexplored part of Brazil's Mato Grosso state has discovered a new species of monkey, as well as two species of fish also thought to be previously undescribed. A specimen of the monkey, which is believed to be from the genus *Callicebus*, is currently being studied at Brazil's Emilio Goeldi museum to ascertain whether it is a new discovery for science. The numbers of species observed during the survey underline the importance of this area for biodiversity, with almost 50 mammals, 208 species of fish and 313 bird species recorded during the 26-day expedition. Although parts of Mato Grosso state gained protection in the 1990s the region has subsequently become synonymous with illegal logging and cattle ranching, as well suffering from a range of other social and environmental problems. It is hoped that the results of the survey will lend weight to calls for proper protection for this important area.

Source: *WWF News* (2011), http://www.wwf.org.uk/wwf_articles.cfm?unewsid=5208

PACIFIC

Pig-nosed turtles in steep decline

A recent study has shown that numbers of pig-nosed turtles have declined steeply over the past 30 years. This freshwater species has a restricted global distribution and is found only in North Australia and New Guinea. Researchers surveyed the numbers of eggs and adult turtles nesting in the Kikori region of Papua New Guinea and estimated the decline in this population to be >50% since 1981. A direct comparison of how the turtles had fared over the past 3 decades was made possible because a similar study had been conducted between 1980 and 1982. Demand for the turtles' eggs and meat on the island has led to the species being dramatically overharvested by indigenous people. The researchers believe conservation plans are urgently needed if the pig-nosed turtle population is to recover. However, local communities often rely on the reptile as a food source, so these plans will need to be made sensitively.

Source: *BBC News* (2011), <http://www.bbc.co.uk/nature/14013362>, and *Biological Conservation* (2011), <http://dx.doi.org/10.1016/j.biocon.2011.06.005>

Communities promote livelihood projects

Two communities in Fiji are now managing livelihood projects that both generate

a sustainable income and protect their forests. Four villages in the district of Nabukelevu in Kadavu and six villages in the Natewa Tunuloa peninsula took part in a 3-year programme funded by the Critical Ecosystem Partnership Fund. Land-owning clans in the villages have established community-declared and community-managed protected areas and are now aware of the negative impact that unsustainable agriculture and logging practices have upon their forests and other natural resources. Projects such as the adoption of modern farm practices to minimize soil erosion, the establishment of tree nurseries (and the replanting of native trees), handicrafts, beekeeping and other income-generating activities now offer sustainable options for landowners. Two local Site Support Groups have been established to work with their respective communities and provincial councils to promote the conservation message to other communities.

Source: *BirdLife International News* (2011), <http://www.birdlife.org/community/2011/07/communities-continue-to-promote-forest-protection/>

AUSTRALIA/ANTARCTICA/NEW ZEALAND

Tasmanian devils vulnerable because of low genetic diversity

The infectious cancer that has decimated the Tasmanian devil population has been able to spread rapidly within the population because of the devils' low genetic diversity, according to a new study. The genomes of two devils, from opposite ends of Tasmania, were sequenced and compared, and were found to differ at only 915,000 sites. By comparison, the genomes of humans from China and Japan differ at 3,257,000 sites. Further research showed that the Tasmanian devil population has had low genetic diversity for >100 years as a result of their eradication from mainland Australia by dingoes brought by settlers, and then further persecution on Tasmania where they were hunted as pests. The devils' low genetic diversity renders them essentially clones of one another, meaning that the facial tumours, which are spread by biting, do not trigger an immune response in individuals.

Source: *New Scientist* (2011), 211(2819), 10–11, and *Proceedings of the National Academy of Sciences of the USA* (2011), <http://dx.doi.org/10.1073/pnas.1102838108>

Toothfish labelling lacks bite for some bass

Patagonian toothfish populations, usually marketed as Chilean sea bass, have suffered

from overharvesting to such an extent that, by the 1990s, only one population was deemed suitable for sustainable harvesting, off the waters around South Georgia. Patagonian toothfish bearing the certification label of the Marine Stewardship Council (MSC) should therefore all come from this part of the oceans. Now a DNA analysis of 36 Patagonian toothfish sold under the MSC label has shown that 8% of the sample were not even Patagonian toothfish at all, but belonged to other species. Of the fish that were toothfish, 15% appeared not to come from the certified South Georgia fishery. Some see this as a serious blow for the MSC process but others urge caution, pointing out that the sample size was small and that MSC certification is still better than nothing. Source: *Nature* (2011), <http://dx.doi.org/10.1038/news.2011.496>, and *Current Biology*, <http://dx.doi.org/10.1016/j.cub.2011.07.006>

Tasmanian tiger's jaw was too small to attack sheep

A new study has found that the Tasmanian tiger or thylacine had such weak jaws its prey was probably no larger than a possum. Humans had previously been blamed for hunting the species to extinction in the early 20th century for allegedly killing sheep. Using advanced computer modelling techniques the research team were able to simulate various predatory behaviours, including biting, tearing and pulling, to predict patterns of stress in the skull of a thylacine. By comparing the skull performance of the extinct thylacine with those of two closely related, living Australasian carnivores, the Tasmanian devil and the spotted-tailed quoll, the team were able to predict the likely body size of the thylacine's prey. The researchers acknowledge there is still much debate about the Tasmanian tiger's diet and feeding behaviour but its weak jaw and inability to kill large prey may well have hastened its extinction.

Source: *Journal of Zoology* (2011), <http://dx.doi.org/10.1111/j.1469-7998.2011.00844.x>

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